

Chapter 3: Managing prompts

Meridian IVR allows customers to manage prompts by using both the Voice Prompt Transfer tool and the Voice Prompt Editor (VPE). The Voice Prompt Transfer tool lets you transfer voice segment files between mailboxes and between Meridian Mail systems. To transfer, back up, or restore voice prompts, use the Voice Prompt Transfer tool. The Voice Prompt Editor modifies and creates voice segment files which are used to customize your voice prompts. If you want to create and modify voice prompts, use the VPE.

Meridian IVR stores all prompts in Meridian Mail mailboxes as voice segment files. Each voice segment file contains zero or more segments, where each segment is a previously recorded piece of voice. Meridian IVR includes many common prompts that you can use in your Meridian IVR applications. However, you can record your own.

Notes:

- 1** All references to the textual fields in the Voice Prompt Editor (such as prompt text, subject, name) are local to the VPE. The Application Editor correlates only with the Segment ID of the VPE masked by the voice segment filename (for example, prompt 243 in file 3000 is referred to as prompt 3243 by the Application Editor).
- 2** As indicated, Meridian IVR stores all prompts in Meridian Mail mailboxes. If the site is prone to heavy use of Meridian Mail broadcast messages, the impact is rapid consumption of mailbox space. In this case, frequent deletion of messages (by logging into the mailbox through the Meridian Mail's voice mail interface) is required to permit free space for the addition of further Meridian IVR voice prompts and messages. If the mailbox is currently in use by Meridian IVR, Meridian IVR must be stopped before a login is permitted from a telephone set.

Meridian IVR prompts

Typically, when Meridian IVR is installed, the person who performs the installation creates a mailbox with 90 minutes of voice storage capacity (360 minutes is the mailbox maximum), and loads the standard prompts using the Voice Prompt Transfer tool (refer to the next section).

Meridian IVR standard prompts are common prompts that you can use with your IVR applications. These are listed in Appendix A of this guide. You can rerecord these prompts with the Voice Prompt Editor or record and load new prompts. System prompts require 38 minutes of storage.

Voice Prompt Transfer tool

The Voice Prompt Transfer tool, utilized through the Meridian Mail console interface, provides you with the facilities to load Meridian IVR standard prompts, transfer prompts between mailboxes, and back up and restore prompts. The Voice Prompt Transfer tool is used, for example, to copy voice prompts from one Meridian IVR system to another.

When using the Voice Prompt Transfer tool, you can use the following commands: Write Prompt Tape, Read from Prompt Tape, and Change Customer Default Number. These commands enable you to transfer, back up, and restore voice prompts. The Write Tape command copies voice prompts onto other tapes, while the Read from Prompt Tape command scans all files on a tape and processes them according to your specifications. The Change Default Customer Number command applies only to customers who have the Meridian Mail Multi-Customer Feature installed on their system; this command references mailboxes in the write or read command.

For further information about accessing and using Voice Prompt Transfer tool, refer to *Meridian Mail System Administration Tools* (NTP 555-7001-305).

Editing prompts with the Voice Prompt Editor

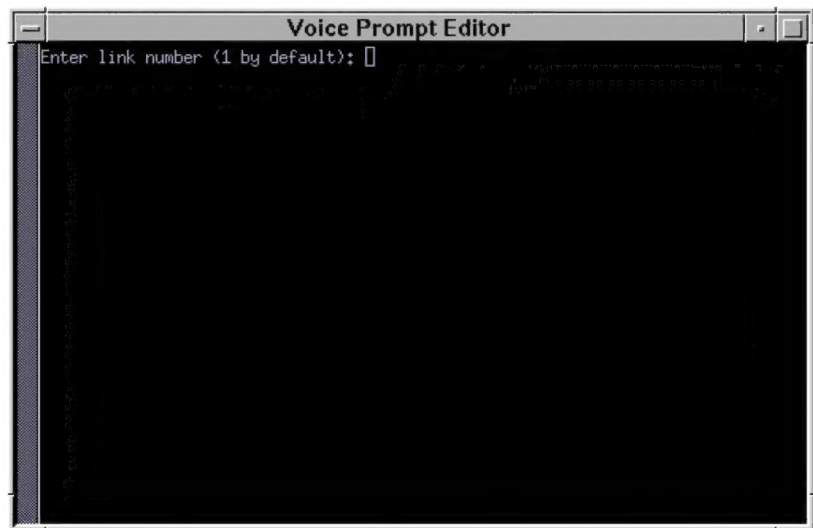
Before using the Voice Prompt Editor, be sure to perform VPE configuration. You can create or edit existing prompts by using the Voice Prompt Editor. Editing features include delete, trim silence, convert sections to silence, and play selected sections of the prompt through a Meridian Mail voice channel.

Notes:

- 1 The Voice Prompt Editor requires use of a shared voice channel on Meridian IVR. If no shared channels are currently available, go to the Meridian Mail console and configure one of the channels for all services. If all shared channels are in use, you must wait for one to become available. Refer to the *Meridian Mail System Administration Guide* (NTP 555-7001-300).
- 2 The MIVR ACCESS link should be up, running, and synchronized before accessing the Voice Prompt Editor.

Figure 3-1 shows the initial Voice Prompt Editor window when the Voice Prompt Editor is accessed.

Figure 3-1
Meridian IVR Voice Prompt Editor

**Logging into the Voice Prompt Editor**

- 1 At the Enter link number (1 by default) prompt, press <1>.
- 2 Enter the telephone number to be used during this VPE session and press <Enter>.
- 3 Enter the mailbox account number and press <Enter>.

- 4 Enter the password and press <Enter>.

Note: A warning message appears when you enter the mailbox password indicating that this mailbox is in use by the Meridian IVR system. This tells you that IVR channels have logged into this mailbox.

Voice segment file structure

Voice segment files store prerecorded words and sentences that are played by IVR applications developed with Meridian IVR.

A voice segment file is a list of zero or more voice segments. Each voice segment has five components.

The segment ID and speech segment are the core elements of the voice segment. The name, title, and script are optional and can be thought of as textual attributes associated with the voice segment (see Figure 3-2).

Figure 3-2
Structure of a voice segment

Segment ID	
Segment name	
Segment title	
Segment script	
Speech segment	

Segment ID

A segment ID identifies a particular voice segment listed in a voice segment file.

Segment name

A voice segment can be assigned a 16-character name. This name references the voice segment in lieu of the segment ID within the VPE.

Segment title

A voice segment can be assigned a 56-character title. The title lets you store brief descriptions of each voice segment. These titles appear whenever you edit a voice segment file. These titles facilitate the maintenance of the voice segments, as explained in the section “Developing applications that use voice segments” on page 3-23.

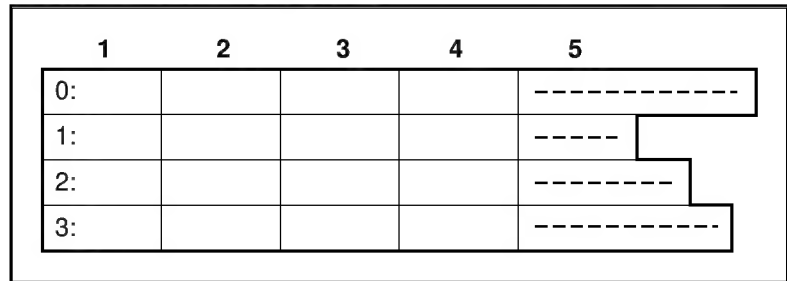
Segment script

A segment script is the recited text of the voice segment. It can contain up to 2 048 characters (including the blanks between the words) for a total of approximately 400 words. The script provides a convenient means to store and maintain the semantic content of each voice segment. The Voice Prompt Editor provides the means for an application developer to prepare the text of the scripts and for a narrator to recite and record them.

Speech segment

The speech segment is a digitally recorded segment of speech of any length. It can contain a word, phrase, or any number of complete sentences up to a total of five minutes (see Figure 3-3). The speech in a segment can be edited in a variety of ways as described in the section “Editing voice segments for concatenation” on page 3-29.

Figure 3-3
Structure of a speech segment



Locating Meridian IVR segment IDs

When using the Voice Prompt Editor, use Table 3-1 to locate a Meridian IVR segment ID.

Table 3-1
Locating Meridian IVR segment IDs

Meridian IVR segment ID	Voice segment file name
0-999	0000
1000-1999	1000
2000-2999	2000
3000-3999	3000
4000-4999	4000
5000-5999	5000
50 000-50 999	50 000
51 000-51 999	51 000

Creating and modifying segment files

This section describes the basic operation of the Voice Prompt Editor. Subsequent sections describe some of the more advanced operations.

General principles

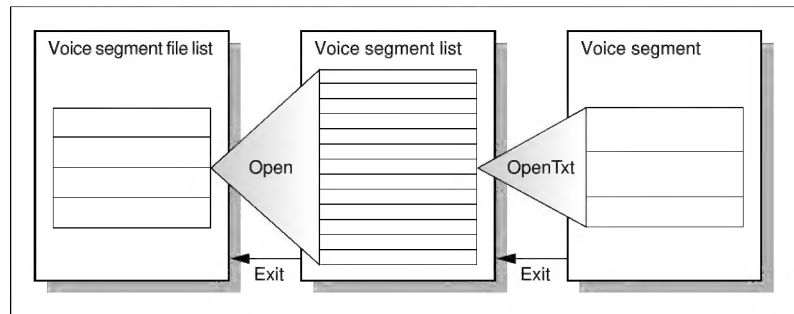
The Voice Prompt Editor provides you with three access levels to create and modify segments, as shown in Table 3-2.

Table 3-2
Access levels

Level	Description
1	A list of the voice segment files in a user's mailbox. (This list does not include any voice messages that may also be in the user's mailbox.)
2	A list of the voice segments in a specific voice segment file.
3	The textual components of a voice segment.

When the Voice Prompt Editor initially starts, the voice segment file list appears (the first level of access). You can move to the voice segment list (the second level of access) by using the arrow keys to position the highlight bar over a specific voice segment file, thus opening the selected voice segment file. Finally, you can access the textual components of a voice segment (the third level of access) by using the arrow keys to position the highlight bar over a specific voice segment, thus opening the selected voice segment. To return to a previous level of access, exit from the current level of access.

Figure 3-4
Voice Prompt Editor “levels of access”



The Voice Prompt Editor provides a consistent and easy-to-use interface. The top part of the window always contains the data being viewed, while the bottom two lines display a context-sensitive list of the available commands (only commands that are applicable to the window and the selected data). This ensures that you are allowed to issue only valid commands.

Whenever the Voice Prompt Editor displays either the voice segment file list or the voice segment list, one of the items in the list is overlaid with a highlight bar. The highlight bar selects the item upon which user commands operate. The up arrow and down arrow keys or the Previous window and Next window keys move the highlight bar (to move up or down one window at a time, respectively).

If the complete list of voice segment files or voice segments do not fit on a single window, a triplet of down arrows (or up arrows) appears at the bottom (or top) of the window. You can display the hidden items by using the appropriate arrow and paging keys.

Voice Prompt Editor commands are invoked by a function key and, whenever possible, a single-letter key. This letter is capitalized in the command name that is listed at the bottom of the window along with the associated function key. Usually, this letter is the first letter of the command. If there is no capitalized letter, only the function key issues the command.

Most commands are consistent throughout the Voice Prompt Editor. Whenever possible, a given command is assigned to the same function key. As well, when you invoke a command that requires further data, a pop-up window appears. After entering the data, you can press either the <F4> key (to execute the command) or the <Esc> key (to abort the command).

Common functions

Table 3-3 lists the common functions of particular keystrokes that are usually available throughout the Meridian IVR system.

Table 3-3
Common function keys

Key	Description
<F4>	Indicates that input to a pop-up window is complete and that the command should now be performed.
<Esc>	Exits from pop-up windows without performing the command.
≠	Moves the highlight bar up one entry in a list, or moves the cursor to the previous field on a form.
Ø	Moves the highlight bar down one entry in a list, or moves the cursor to the next field on a form.
<Pg Up>	Moves the highlight bar up one entire page of entries in a list or, if already on the first page, moves it to the first entry in the list.
<Pg Down>	Moves the highlight bar down one entire page of entries in a list, or, if already on the last page, moves to the last entry in the list.

Whenever you are prompted to enter textual information such as the name of a newly created voice segment file, you can enter any characters from the keyboard.

Table 3-4 lists the keys that can be used any time the cursor is in a text input field.

Table 3-4
Text input field keys

Key	Description
␣	Moves the cursor to the previous character.
␣	Moves the cursor to the next character.
<Ctrl+L>	Moves the cursor to the beginning of the previous word on the same line.
<Tab>	Moves the cursor to the beginning of the next word.
<Ctrl+X>	Deletes the entire line.
<Backspace>	Deletes the character to the left of the cursor.
	Deletes the character under the cursor.
<Ins>	Toggles between insert and overwrite modes.

Creating a new voice segment file

The first time you start the Voice Prompt Editor, there are no voice segment files to display unless the Voice Prompt Transfer tool has been used to transfer Meridian IVR's system prompts to the mailbox which you are using with the Voice Prompt Editor.

When a mailbox does not contain any files, you are presented with the following commands on the command line:

Table 3-5
Commands for an empty mailbox

Key	Function	Description
<F1>	New	Creates a new, empty voice segment file.
<F3>	Logon	Logs on to a different user account (to access the voice segment files in another user mailbox).
<F4>	Quit	Quits the program.

New

Choosing the New command creates a new voice segment file. When invoked, the New command presents a pop-up window prompting you for the name and the subject of the new voice segment file (which is optional). The required setup for a voice segment file name consists of a four- or five- digit number. Since files 0000 and 1000 are shipped with the system, all subsequent file names should follow this convention. Meridian IVR voice segment file names conform to the format specified in Table 3-1 (for example, 2000, 3000, and so on). If a name is not provided, the file is not created. Once you have entered the text, you can select the <F4> key to commit the file or the <Esc> key to abort the operation.

Logon

The Logon command enables you to log off of the current account mailbox and log onto another user account for access to another user's voice segment files. When invoked, the Logon command presents a pop-up window prompting you for a new account number. As a security feature, your password is not displayed as you type it. Once the account information has been entered, you can select the <F4> key to log off of the current account and log on to the new account, or the <Esc> key to abort the operation.

Help

The Help key presents brief descriptions of the commands displayed on the command line.

Quit

The Quit command terminates the Voice Prompt Editor program, purges your mailbox of any files marked for deletion, drops the telephone connection (if one was previously established), and exits you from the VPE.

Managing voice segment files

Once you commit a file, it is added to the list of voice segment files in the user's mailbox (see Figure 3-5). Table 3-6 summarizes the information that each voice segment file in the list contains.

Table 3-6
Voice segment file information

Field	Description
Name	Name of the voice segment file.

Table 3-6
Voice segment file information (continued)

Field	Description
Date of Creation	Date and time that the voice segment file was created.
Date of Last Modification	Date and time that the voice segment file was last modified.

Figure 3-5
Voice segment file list

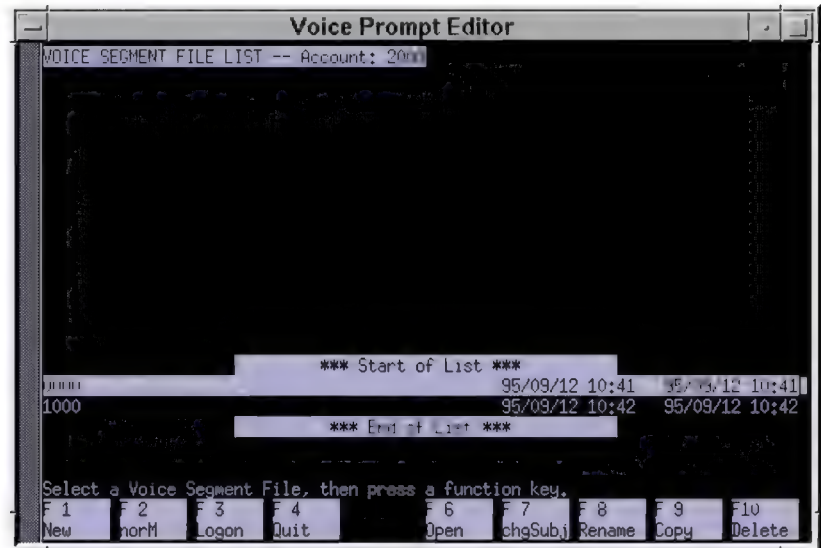


Table 3-7 lists the commands associated with a mailbox containing one or more files.

Table 3-7
Commands for a mailbox with file(s)

Key	Function	Description
<F1>	New	Creates a new, empty voice segment file.
<F2>	norM	"Normalizes" the selected voice segment file. The norM command first trims all leading and trailing silence, then pads the trailing end of each voice segment in the voice segment file with a fixed amount of silence.

Table 3-7
Commands for a mailbox with file(s) (continued)

Key	Function	Description
<F3>	Logon	Logs on to a different user account (for example, to access the voice segment files in another user mailbox).
<F4>	Quit	Quits the program.
<F6>	Open	Opens the selected voice segment file.
<F7>	chgSubj	Modifies the subject field of the selected file.
<F8>	Rename	Renames the selected file.
<F9>	Copy	Makes a copy of the selected file.
<F10>	Delete/ Undelete	Marks or unmarks the selected file for deletion.

New

The New command allows you to create a new voice segment file. When invoked, the New command presents a pop-up window prompting you for the name and the subject of the new voice segment file (which is optional). If a name is not provided, the file will not be created. Once the text has been entered, you can select the <F4> key to commit the file or the <Esc> key to abort the operation.

norM

The norM command is used to prepare a voice segment file for concatenation. This command is explained further in this chapter in the section “Normalizing a voice segment file” on page 3-29.

Logon

The Logon command enables you to log off of the current account and log onto another user account for access to another user's voice segment files. When invoked, the Logon command presents a pop-up window that prompts you for a new account number. As a security feature, your password is not displayed as you type it. Once the account information has been entered, you can select the <F4> key to log off of the current account and log on to the new account, or the <Esc> key to abort the operation.

Quit

The Quit command terminates the Voice Prompt Editor program, purges the user's mailbox of any files marked for deletion, drops the telephone connection (if one had been established), and returns you to the operating system prompt.

Open

The Open command moves you to the second level of access by opening the selected voice segment file and displaying the voice segment list. At this level, you can add new voice segments or modify existing ones.

chgSubj

The chgSubj command presents a pop-up window prompting you to modify the subject of the voice segment file.

Rename

The Rename command presents a pop-up window that prompts you to modify the name of the voice segment file.

Copy

The Copy command duplicates an existing voice segment file. When invoked, the Copy command presents a pop-up window that prompts you for the name of the duplicate voice segment file.

Delete

The Delete command marks a file for deletion by displaying the word DELETED to the right of the file's subject field. The actual deletion of the file is deferred until you log off from the current account or quit the program. At this point, all of the files that have been marked for deletion are purged from your mailbox. This feature lets you undelete (recover) a purged file prior to log off. Whenever the highlight bar is positioned on a file marked for deletion, the <F10> key becomes the Undelete command.

Help

The Help key presents you with brief descriptions of the commands displayed on the command line.

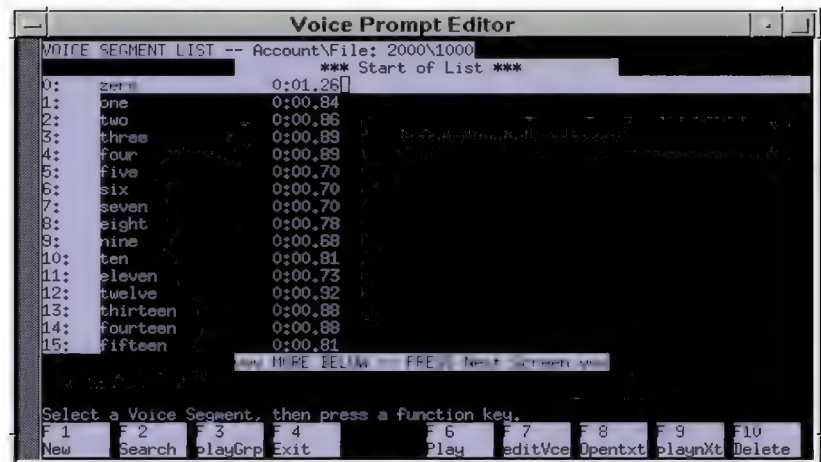
Modifying a voice segment

In order to modify a voice segment, the voice segment file must be opened to display the list of voice segments in the file. Table 3-8 summarizes the information about each voice segment in the list.

Table 3-8
Voice segment information

Field	Description
Segment ID	Index of the voice segment in the file.
Name	Name of the voice segment.
Length	Duration of the voice segment in hundredths of a second.
Title	Title of the voice segment.

Figure 3-6
Voice segment list



In addition to the common functions provided by the arrow and paging keys, the <Ctrl+T> and <Ctrl+B> keys position the highlight bar at the first and last segments on the list of voice segments, respectively.

Table 3-9 summarizes the commands available when accessing a list of voice segments.

Table 3-9
Commands for the list of voice segments

Key	Function	Description
<F1>	New	Creates a new, empty voice segment.
<F2>	Search	Searches for a voice segment.
<F3>	playGrp	Sets up a group of voice segments for concatenated playback.
<F4>	Exit	Exits from the entire voice segment file.
<F6>	Play	Plays the speech segment of the selected voice segment.
<F7>	editVce	Displays the voice editing command line.
<F8>	Opentxt	Displays the textual components associated with the voice segment.
<F9>	playnXt	Selects the "next" voice segment and play its speech segment.
<F10>	Delete	Marks the selected segment for deletion.
<F10>	Undelete	Removes the "DELETED" mark from the selected segment.

Play

The Play command establishes a telephone connection (if one does not already exist) and plays the speech segment of the selected voice segment. (If the call is forwarded to another number, a message appears on the window and the command is aborted.)

Temporary commands

Table 3-10 summarizes the commands available while the voice segment plays.

Table 3-10
Commands for voice segment playback

Key	Function	Description
<F6>	Stop	Stops the playback of the segment.
<F8>	skipBak	Skips five seconds backwards and continues playback.

Table 3-10
Commands for voice segment playback (continued)

Key	Function	Description
<F9>	skipFwd	Skips five seconds forwards and continues playback.

If you choose the Stop command or if the playback operation reaches the end of the segment, the previous set of commands reappears.

Note: If you either hang up the associated telephone or start using the arrow or paging keys, playback stops automatically.

editVce

Table 3-11 summarizes the voice editing commands displayed when you choose the editVce command.

Table 3-11
Voice editing commands

Key	Function	Description
<F1>	play1	Concatenates voice segments, then playback.
<F2>	play2	Concatenates voice segments, then playback.
<F3>	playGrp	Sets up a group of voice segments for concatenated playback.
<F4>	Exit	Returns to the previous set of commands.
<F6>	Play	Plays the speech segment of the voice segment.
<F7>	Record	Records a speech segment into the voice segment.
<F8>	Norm	Removes all silence from beginning and end of voice segment.
<F9>	Trim	Removes defined amount of voice segment.
<F10>	Addsil	Pads silence on to beginning and/or end of voice segment.

The remaining voice editing commands provide more sophisticated capabilities and are described in the section “Playing and editing a group of concatenated voice segments” on page 3-33.

Record

The Voice Prompt Editor beeps immediately when the destination telephone is on the same Meridian 1 switch as Meridian IVR. The VPE beeps when the telephone goes idle.

The Voice Prompt Editor also beeps if the destination telephone is on a Meridian 1 switch that is accessed over trunks. Meridian IVR is signaled only when the local Meridian Mail system detects the voice of the called party which initiates a beep.

The Record command beeps to signal when the recording begins and records everything spoken into the mouthpiece of the associated telephone set or played through the audio line interface. While the system records the speech, a Stop command appears on the command line. If you choose the Stop command, the recording stops and the EditVce command line reappears. If the speech segment of the selected voice segment already exists (that is, it already contains a recording), the previously recorded speech is replaced in its entirety.

Note: The maximum duration of an individual speech segment is determined by the “Maximum Duration” of a voice message file. This value is determined by your system administrator and set in the Organization Profile.

As with the Play command, the Voice Prompt Editor checks to see if there is an established connection with the associated telephone set before starting to record. If no connection is established, the Voice Prompt Editor calls the associated telephone set and begins to record only when the call is answered.

During recording, a counter indicates how many seconds have elapsed since the recording began. The actual duration of the recorded speech is only computed after the recording is complete, since the recording will not actually begin until the system detects sufficient voice energy and all long stretches of silence are compressed.

Opentxt

The Opentxt command moves you to the third level of access by opening the selected voice segment and displaying its textual components. At this level, you can add new voice segments or modify existing ones.

playNxt

The playNxt command provides a convenient single-key command to play each voice segment in turn. After the highlight bar is automatically repositioned on the next voice segment in the list, the selected voice segment plays.

Delete

The Delete command marks a voice segment for deletion. The actual deletion of the voice segment is deferred until you exit and save the modified voice segment file. At this point, all of the voice segments that have been marked for deletion are purged from the voice segment file. This feature enables you to undelete (recover) voice segments as long as the file has not been saved. Note that whenever the highlight bar is positioned on a voice segment marked for deletion, the <F10> key changes to the Undelete command.

New

The New command adds an empty voice segment to the end of the voice segment file, displays the associated text form for the new segment, places the cursor at the beginning of the name field, and prompts you to enter a name, title, and script for the newly created segment. To complete the creation of the voice segment, you must press the <F4> key.

The New command is intended to streamline the entry of large quantities of text (such as scripts) associated with voice segments. After entering the textual information for each voice segment, you can step through the segment scripts (using the Next command) to record them.

Search

The Search command presents a pop-up window that prompts you to enter criteria for finding a particular segment within the segment file. The search criteria can be the (numeric) segment ID, substrings in the segment name, title and script, or any combination thereof. In addition, it is possible to search by the amount of voice recorded in a segment. This last criterion enables you to confirm that all of the segments have been recorded.

Each field in the pop-up window can have a value. Only a segment in which all of the criteria are met will be found. To find all of the segments which match the search criteria, repeat the search (the search fields show the values previously used). After you enter the search criteria, you can press the <F4> key to start the search, or <Esc> to abort the operation.

Searches may take a few moments depending on the criteria provided and the size of the segment file. If the segment ID is specified, the remaining fields are ignored. This is the quickest way to locate a particular segment or to move to a specific location in the file.

Figure 3-7 shows the search pop-up window. In this example, you are searching for a segment less than five seconds long, with the word “help” in its title.

Figure 3-7
Segment search window

Search Segment

Seg ID: _____

Name: _____

Title: help _____

Script _____

Length: <0:05_("<" or ">" mm:ss)

Enter search criteria, press F4 to start search.

The search locates the next matching segment in the segment file, looping around to the beginning if the end of the file is reached. If a match is not found, you remain at the location within the file where the search was initiated.

playGrp

The playGrp command displays the form and command line required for setting up a group of voice segments for concatenated playback. The section “Grouping voice segments for concatenation” on page 3-30 explains this form and its associated commands.

Exit

The Exit command initiates a two-step sequence for returning to the list of segment files. In the first step of the exit sequence, the two options listed in Table 3-12 appear on the command line.

Table 3-12
Commands available with Exit command

Key	Function	Description
<F4>	Exit	Saves the changes made to the voice segment file.
<F10>	Delete	Cancels any changes made to the voice segment file (and reverts to the file as it was before it was opened).

If the file has not been modified, the system skips the first step.

In the second step of the exit sequence, a pop-up window prompts you for a file name, directory, and identifier prefix. This information is used to store a header file of symbolic names. This file should be incorporated into the Meridian IVR application and must be updated whenever a voice segment file is modified. A detailed description of the header file and its use is provided in the section “Creating a segment index header file” on page 3-26.

If you do not want to create or update a header file, press <ESC> to return to the list of voice segment files.

If you want to create or update a header file, you must first fill out the form on the pop-up window (or use the defaults provided) and then press the <F4> key. The VPE downloads the necessary information from the Meridian Mail system and creates (or overwrites) a header file before returning to the list of voice segments.

Note: As with many other text editors, you should periodically exit and save the voice segment file on which you are working. This minimizes the recovery effort in the event of a sudden power failure.

Modifying the textual components of a voice segment

To modify the textual components of a voice segment, the segment must be opened to display the voice segment. Table 3-13 summarizes the information associated with modifying textual components of a voice segment.

Table 3-13
Voice segment information

Field	Description
Segment ID	Index of the voice segment in the file.
Length	Duration of the voice segment in hundredths of a second.
Name	Name of the voice segment.
Title	Title of the voice segment.
Script	Script of the voice segment.

Figure 3-8
Textual components of a voice segment



Table 3-14 summarizes the commands available when accessing the textual components of a voice segment (see Figure 3-8).

Table 3-14
Voice segment textual components commands

Key	Function	Description
<F1>	New	Creates a new, empty voice segment.
<F2>	Search	Searches for a voice segment.
<F3>	playGrp	Sets up a group of voice segments for concatenated playback.
<F4>	Exit	Exits from the current level, and returns to the previous level. The Exit command exits from the voice segment level of access and returns to the voice segment list level of access.
<F6>	Play	Plays the speech segment of the selected voice segment.
<F7>	editVce	Displays the voice editing command line.

Table 3-14
Voice segment textual components commands (continued)

Key	Function	Description
<F8>	editTxt	Modifies the textual components associated with the voice segment. The editTxt command modifies the textual components of the selected voice segment by prompting you to modify the name, title, and script of the segment.
<F9>	neXt	Selects the “next” voice segment. The neXt command provides a convenient single-key command to move to the next segment while still viewing the form containing the textual components associated with an individual voice segment.
<F10>	Delete	Marks the selected segment for deletion.
<F10>	Undelete	Removes the DELETED mark from the selected segment.

Developing applications that use voice segments

This section suggests how to use the Voice Prompt Editor in the development cycle of a Meridian IVR application.

Recording voice segments

A recording session obtains the best results if it proceeds with minimum interruptions. Recording sessions should take place after the segments have been created and the scripts for each segment have been finalized.

Procedure 3-1 Recording voice segments

- 1 Start the segment editor and log on to the correct account.
- 2 Open the segment file to be recorded.
- 3 Open the text of the first segment.
- 4 Select the editVce-Record function.
The first time this function is selected, the phone rings.
- 5 Answer the phone. After the beep, read the script aloud into the phone, then select Stop.

- 6 Select Play to verify the recording.

Note: After verifying that the first few segments are of suitable quality and volume, this step can be skipped, and all the segments can be verified once all of them are recorded.)

- 7 Select Exit-neXt to go directly to the text of the next segment.

- 8 Go to step 4.

Repeat this procedure until all segments are recorded. To verify all of the segments in the file, return to the voice segment list window. Select the first segment, play it, then select “playnXt” until you have heard all the segments.

As a rule, when recording short segments (for example, single words), we recommend that you say a phrase which uses the word in its appropriate context (for example, to record the word “o’clock,” say the phrase “two o’clock”). The Voice Prompt Editor can then be used to trim the excess words from these segments as explained in the section “Editing voice segments for concatenation” on page 3-29. This technique produces more natural sounding speech segments.

Using the optional audio line interface

If you have recorded your prompts in a studio onto a cassette tape, use the audio line interface (ALI) to retrieve the prerecorded prompts from tape and transfer them to the Meridian Mail system. The ALI package includes a Multi Purpose Amplifier (MPA), an AC adapter for MPA, an ALI cable, and a stereo headset.

To transfer the prompts to Meridian Mail, you need to connect the ALI and the tape recorder to your telephone set.

Procedure 3-2

Using the optional audio line interface

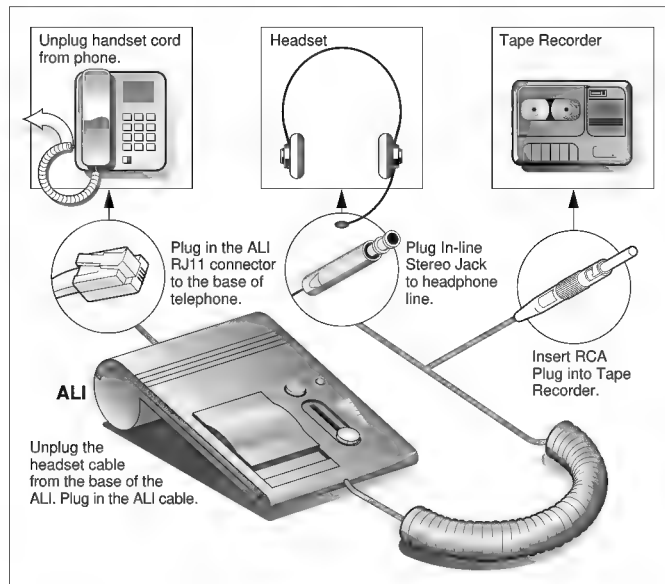
- 1 Disconnect the handset cord from the base of the telephone.
- 2 Plug the RJ11 cable (the short straight cable) in the RJ11 connector on the telephone.
- 3 Unplug the headset cord from the bottom of the ALI.
- 4 Plug the ALI cable in the headset cord outlet on the bottom of the unit.
- 5 Connect the remaining cable ends on the ALI cable.

- 6 Insert the RCA plug (male connector) in the tape recorder.
- 7 Connect the other end of the cable, which is the in-line stereo jack, to the headset.

The headset is used for listening to the prompts as they are played back. It is not used for recording because it has no microphone.

Figure 3-9 shows the connections for the audio line interface.

Figure 3-9
Connecting the audio line interface



Transferring prompts to Meridian Mail

Follow the same procedure for recording voice segments. Instead of recording voice segments by reading aloud into the phone, the prerecorded segments on tape are used.

It is important to do several test recordings using the ALI to ensure that the audio settings are correct. Consult the guide entitled “Multi Purpose Amplifier”, which is shipped with the ALI, for information on how to set the volume settings on the ALI. This ensures that your prompts recorded on Meridian Mail are clear, audible, and not distorted.

To record segments from tape, use recorded segments vocally for those prerecorded on tape. To do this, follow Procedure 3-1, but instead of step 5 in this procedure, do the following:

Simultaneously, click on Record in the VPE and press Play on the tape recorder to record the first prompt. When the first prompt is recorded, click on Stop in the VPE and Pause on the tape recorder. Do this for each prompt until all have been recorded.

When you play back the prompts, use the headset to listen to them and make sure that you have recorded them properly.

Maintaining the voice segment file

Once it is created, maintaining a voice segment file is easy. You can create new segments and modify individual segments. You should update the segment scripts when necessary.



CAUTION! **Risk of data corruption**

Deleting segments will cause subsequent segments to be renumbered. This can affect an already developed application.

ATTENTION!

Never delete system prompts.

Creating a segment index header file

For an application program to play or record a specific voice segment, it must know the reference number or index of the segment. The Voice Prompt Editor facilitates this by automatically creating a segment index header file. The header file contains “define” statements which define each segment’s name as a symbolic name having the value of that segment’s index. Each define statement ends with a comment which contains the segment’s title. A symbolic name is also defined as the date and time that the file was last changed.

When you exit from a segment file, a pop-up window offers you the option of creating a segment index header file (see Figure 3-10). You can specify a directory (defaulting to the current directory) and a file name (defaulting to the first eight characters of the segment file name with a suffix of “.h”).

Figure 3-10
Segment index header file

Create Segment ID Header File

File Name: 2000.h

Directory: _u/ivr/vrs/exe

Identifier Prefix: _____

Press F4 to create a header file, or ESC to exit without creating a file.

Note: Meridian IVR does not use these header files. They can, however, be printed to provide a reference of your recorded segments.

Suggested guidelines for prompts

While requirements for prompts vary greatly depending on the application, a few guidelines pertain to most applications. Consider the following guidelines when designing and creating prompts:

- Carefully consider the audience. For those who use the system only once or twice, prompts should be longer and more detailed than prompts for those who use a system daily.
- Use only one voice for all the prompts within a particular application. There are circumstances where many voices can be used, but these situations are rare and require special attention. (There are, for example, applications that play back status messages or advertisements that are updated regularly. It is not normally feasible to have these recorded messages use the same voice. The body of the application, however, can and should use the same voice.)
- Select a speaker with a voice considered pleasant by the audience. Choose someone who speaks clearly and articulately. Avoid unusual or pronounced accents and voices that are noticeably high or low in pitch. For the final version of prompts, we suggest that you choose someone with voice training (for example, an actor or singer).
- Attempt to regulate style, speed, volume, and pitch when recording. As voices change over time and with variations in health, prompts chosen from a single recording session are often the most consistent.
- Record prompts in a quiet, echo-free environment. Do not underestimate the noise caused by office air circulation systems. These noises are much louder when heard by someone calling from a quiet residence.

These are general guidelines. There are circumstances where some of these guidelines may not apply. Each application and audience should be carefully considered.

Editing voice segments for concatenation

The following section describes some of the considerations in using voice segments to play back such information as stock quotations and account balances. As a general rule, a single-voice segment comprising a complete sentence or lengthy phrase sounds more natural than a group of concatenated voice segments. The major reasons for this are as follows:

- segment inflections which do not sound natural in certain groups
- varying length pauses between voice segments in a group

While the Voice Prompt Editor cannot compensate for the first type of problem, it does provide a suite of tools to address the second type of problem. In particular, the voice editing commands of the Voice Prompt Editor are designed to streamline a process for preparing, verifying, and fine-tuning groups of concatenated voice segments after the entire voice segment file has been recorded.

Procedure 3-3

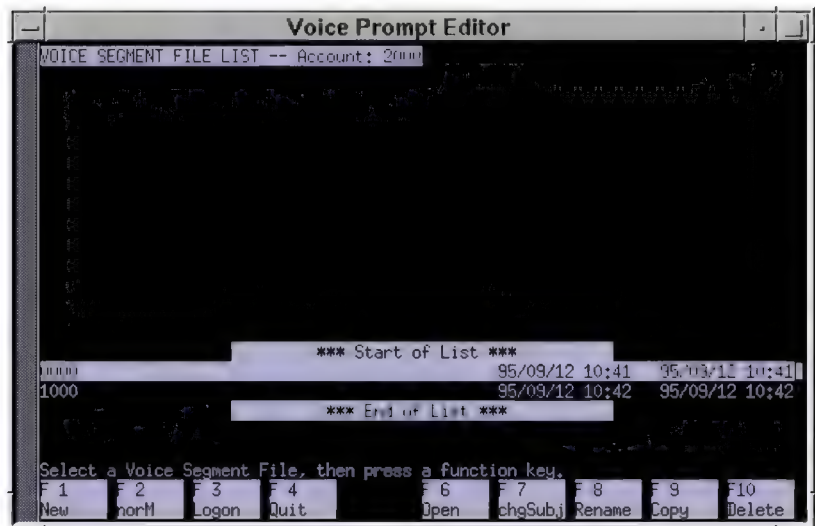
Editing voice segments for concatenation

- 1 Normalize the voice segment file.
- 2 Group the voice segments to be concatenated.
- 3 Play back the (concatenated) group of voice segments.
- 4 Trim, pad or rerecord the voice segments as required.

Normalizing a voice segment file

Whenever the list of voice segment files appears (see Figure 3-11) the command line contains a command called “norM” <F2>. The norM command first trims all leading and trailing silence, then pads the trailing end of each voice segment in the voice segment file with a fixed amount of silence. The voice segments can be padded with 0, 1/16, 1/8, 1/4, 1/2, 3/4, 1, or 1-1/2 seconds of silence. This powerful command enables you to put the voice segment file in a well-known, normalized state before proceeding with additional voice editing operations.

Figure 3-11
Voice segment file list

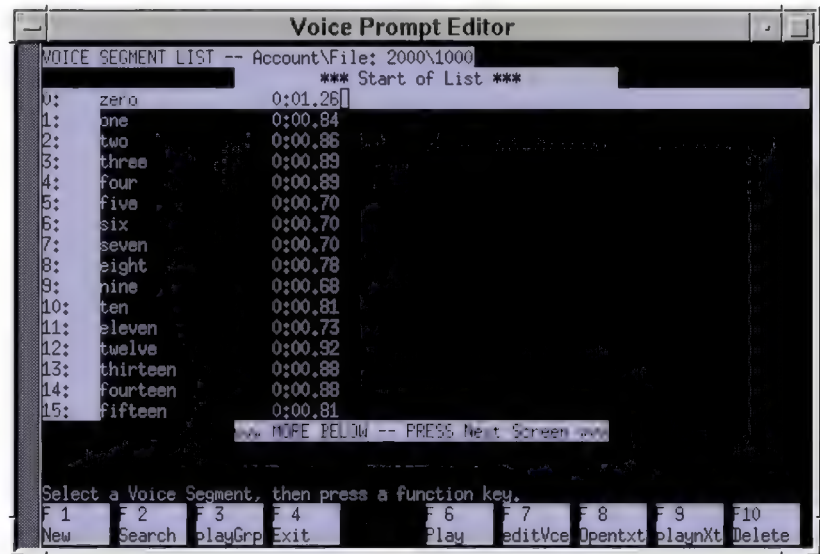


When you choose the normalize command, you must wait several moments as the file is processed. For convenience, you can press <F4> to stop the normalization process before it is complete.

Grouping voice segments for concatenation

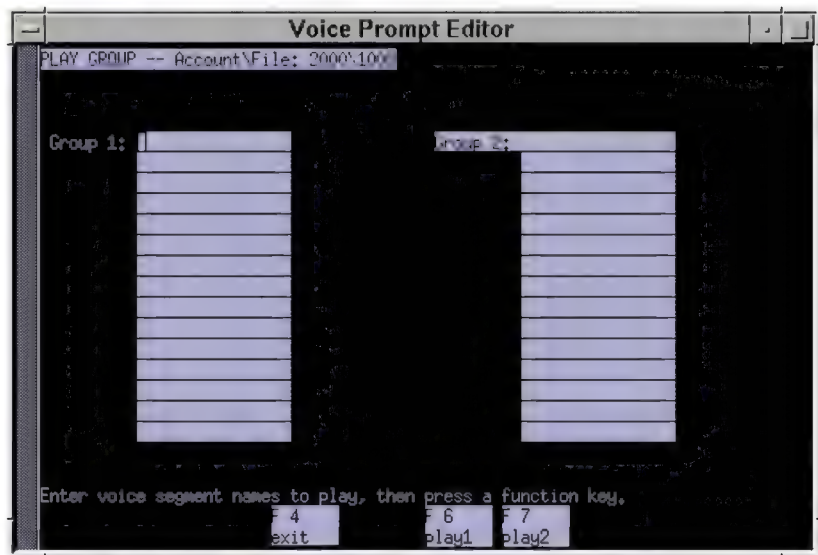
Grouping voice segments for concatenation (the second step of the process) is most easily accomplished using the list of normalized voice segments. Refer to Figure 3-12.

Figure 3-12
Voice segment list



You can select and store a voice segment in a temporary buffer by positioning the highlight bar on the voice segment and pressing the <Ctrl+G> keys simultaneously. Repeat this process, selecting and storing a group of segments in the order in which they are to be played back. When 15 (at most) voice segments have been gathered, issue the playGrp <F3> command to display the form used to set up a group of voice segments for concatenated playback.

Figure 3-13
“Play Group” form



Position the cursor in the left-hand column and restore the group of voice segments by pressing <Ctrl+P>. The group of selected voice segments is then pasted into the left-hand column and is ready for concatenated playback. Then issue the Exit command to return to the list of voice segments. This entire process can be repeated to create two groups of up to 32 voice segments each.

A second group of voice segments can also be created by repeating the previous steps and positioning the cursor in the right-hand column of the “PlayGrp” form before pressing <Ctrl+P>. This second group is useful for comparing voice segments with slightly different inflections. Note that the up-arrow key moves the cursor from the top line of the right-hand column to the top line of the left-hand column and back again.

Another way to set up a group of voice segments is to type the name of each segment into the appropriate column of the “Play Group” form. This approach requires that each segment name is validated before the group of segments can be played for the first time. The validation process can take a few moments. Segment name validation is not required if the group of segments is set up using the <Ctrl+G> and <Ctrl+P> buffering technique.

The initial setup of the two groups of concatenated voice segments can be tested by issuing the play1 and play2 commands. Refer to Figure 3-13.

Playing and editing a group of concatenated voice segments

Playing a group of concatenated voice segments (the third step of the process) can usually identify a voice segment that contains too much leading or trailing silence, as well as any undesirable noise (pops or hisses) at either end of the segment. If any of these conditions are found, you can trim, pad, or rerecord individual voice segments (the fourth step of the process) by exiting to the voice segment list display. Once you return to the voice segment list display (see Figure 3-12), you can press <F7>, the “editVce” command, to activate the voice editing commands (see Figure 3-14). Table 3-15 summarizes the ten commands available when using the editVce command.

Figure 3-14
Voice editing form

The screenshot shows the 'Voice Prompt Editor' window. At the top, it says 'VOICE SEGMENT LIST -- Account\File: 2000\1000'. Below this, there is a header '*** Start of List ***'. A list of voice segments is displayed, numbered 0 through 15, with their corresponding durations. At the bottom, there is a section titled 'EDIT VOICE: Press a function key.' which lists various function keys and their corresponding actions.

Segment Number	Segment Name	Duration
0:	zero	0:01.26
1:	one	0:00.84
2:	two	0:00.86
3:	three	0:00.89
4:	four	0:00.89
5:	five	0:00.70
6:	six	0:00.70
7:	seven	0:00.70
8:	eight	0:00.78
9:	nine	0:00.68
10:	ten	0:00.81
11:	eleven	0:00.73
12:	twelve	0:00.92
13:	thirteen	0:00.88
14:	fourteen	0:00.88
15:	fifteen	0:00.81

Below the list, there is a prompt: '*** MORE BELOW -- PRESS Next Screen ***'. At the bottom, the 'EDIT VOICE: Press a function key.' section is shown with the following options:

Function Key	Action
F 1	play1
F 2	play2
F 3	playGrp
F 4	Exit
F 6	Play
F 7	Record
F 8	Norm
F 9	Trim
F10	Addsil

Table 3-15
Commands available with the editVce command

Key	Function	Description
<F1>	play1	Plays the first group of concatenated voice segments. The play1 and play2 commands instantly verify the effects of each voice editing operation on the two groups of concatenated voice segments (set up in the Play Group form) without having to display the Play Group form.
<F2>	play2	Plays the second group of concatenated voice segments. The play1 and play2 commands instantly verify the effects of each voice editing operation on the two groups of concatenated voice segments (set up in the Play Group form) without having to display the Play Group form.
<F3>	playGrp	Sets up one or two groups of voice segments for concatenated playback. The playGrp command enables you to return to the Play Group form in order to modify the groups of voice segments for concatenated playback.
<F4>	Exit	Returns to the previous set of commands. The Exit command redisplay the previous command line.
<F6>	Play	Plays the speech segment of the selected voice segment. The Play command functions exactly as explained in the section "Modifying a voice segment" on page 3-14.
<F7>	Record	Records a speech segment into the voice segment. The Record command functions exactly as explained in the section "Modifying a voice segment" on page 3-14.
<F8>	Norm	"Normalizes" the voice segment. The norM command first trims all leading and trailing silence, then pads the trailing end of the selected voice segment with 0, 1/16, 1/8, 1/4, 1/2, 3/4, 1, or 1-1/2 seconds of silence.

Table 3-15
Commands available with the editVce command (continued)

Key	Function	Description
<F9>	Trim	Trims either end of the voice segment. The Trim command enables you to trim 1/16, 1/4, or 1 second of recorded information off either end of the segment. Furthermore, this command enables you to trim all silence off either end of the selected voice segment.
<F10>	Addsil	Pads either end of the voice segment with silence. The Addsil command enables you to pad either end of the voice segment with an additional 1/16, 1/4, or 1 second of silence. This command edits segments that do not have sufficient leading or trailing silence.

Use the Norm, Trim, and Addsil commands repeatedly to fine-tune each voice segment. Play the concatenated group of voice segments between each voice editing operation to confirm its effect. Since the trimming operations cannot be reversed, use this command judiciously. Save the voice segment file frequently during intensive voice editing sessions by exiting to the list of voice segment files, then reopening the file.

Voice Prompt Editor command summary description

Abort

Aborts the voice segment file normalization process.

Add Silence (Addsil)

Pads either end of a voice segment with 1/16, 1/4, or 1 second of silence.

Cancel

Cancels the current operation.

Change Subject (chgSubj)

Presents a pop-up window allowing you to change the subject string associated with a segment file.

Copy

Copies a segment file including all the segments and associated text. A pop-up window appears, and you enter the name for the new file. It can take several minutes to copy large segment files.

Delete (a segment)

Marks a segment for deletion (“Deleted” appears to the right of the segment title). You can “Undelete” the segment any time before you exit from the file. The system automatically renumbers subsequent prompts. *Do not delete system prompts.*

Delete (a segment file)

Marks a segment file for deletion (the creation and last update dates are replaced with Deleted). You can Undelete a segment file any time before you exit from the Voice Prompt Editor. Once a segment has been deleted, all subsequent segments are renumbered accordingly.

Done

Indicates when you have finished entering text (for example, in a pop-up window).

Edit text (editTxt)

Puts the editor into a mode that allows you to change the name of a segment, the segment's title, or the segment's script. You are automatically put into this mode when you select the New command for creating a new segment.

Edit voice (editVce)

Puts the editor into a mode that allows you to play, record, normalize, trim, and pad voice segments. Exit (from the voice segment display) returns you to the voice segment list display.

Exit (from the voice segment list display)

Initiates a two-step sequence. First, if the segment file was modified, it offers you the option of saving or canceling the changes. Second, it prompts you to enter a filename, pathname, and prefix for a segment index header file. If you press <Esc> twice, no header file is created. If you press <F4>, the editor creates a segment index header file for the segment file from which you have just exited. Refer to the section “Creating a segment index header file” on page 3-26 for further information.

Exit (from the Play Group form)

Returns you to the voice segment list display.

Exit (from the voice editing command line)

Redisplays the previous command line.

Help

Presents a description of the commands presented in the command line.

Logon

Displays a pop-up window allowing you to enter another account number and password. Once you have successfully logged on to the new account, you no longer have access to files in the current account. You need to know the account number and password for the new account.

New (from the voice segment list display)

Creates a new segment in the current file. The segment appears at the end of the file. You are shown the segment text window and put into a mode allowing you to supply the segment's name, title, and associated script.

New (from the voice segment file list display)

Displays a pop-up window allowing you to enter a file name and subject. If the file name is unique, a new segment file is created.

Next (neXt)

Displays the text for the next segment in the file.

Normalize (Norm — from the voice editing command line)

Trims all leading and trailing silence, then pads the trailing end of a segment with 0, 1/16, 1/8, 1/4, 1/2, 3/4, 1, or 1-1/2 seconds of silence.

Normalize (norM — from the voice segment file list display)

Prepares a voice segment file for concatenation and normalizes every voice segment in a voice segment file. The operation can be aborted at any time by issuing the Abort command.

Open

Opens the selected segment file for editing. You see the list of segments. Large files may take a few moments to open.

Open text (openTxt)

Displays the text associated with a segment including its name, title, and script. This text can be changed with the editTxt command.

Play

Plays the selected segment. If necessary, a telephone connection is established to the extension specified when the Voice Prompt Editor started.

Play group (playGrp)

Displays the Play Group form. Using this form, you can set up two groups of voice segments for concatenation.

play1

Plays the group of segments stored in the Group 1 list of the playGrp display.

play2

Plays the group of segments stored in the Group 2 list of the playGrp display.

Play next (playnXt)

Selects the next segment and starts playing. Repeated use of this command allows you to listen to all of the segments in a file.

Quit

Quits the Voice Prompt Editor and returns to the operating system. Any voice segment files marked for deletion are deleted.

Record

Allows you to record voice for the current segment. Whenever Record is selected, any existing voice is erased. Recording starts after the tone. Silence during the recording is automatically compressed to 1/2 second of silence. If necessary, a telephone connection is established to the extension specified when the Voice Prompt Editor was started. To terminate recording, select Stop, or press the arrow or paging keys.

Rename

Presents a pop-up window allowing you to change the name of a selected segment file. The name you choose must be unique within that account.

Save

Saves the changes made to a voice segment file.

Search

Presents a pop-up window that prompts you to enter criteria for finding a particular segment within the segment file. The search criteria can be the (numeric) segment ID, substrings in the segment name, title, and script, or any combination thereof. In addition, it is possible to search by the amount of voice recorded in a segment. This last criterion enables you to confirm that all of the segments have been recorded.

Skip backward (skipBak)

Skips back five seconds within the currently playing segment and continues playing. This command is available only when a segment is playing.

Skip forward (skipFwd)

Skips over the next five seconds within the currently playing segment and continues playing. This command is available only when a segment is playing.

Stop

Stops the recording or playback. The Stop command is available only during recording or playback.

Trim

Trims 1/16, 1/4, or 1 second of recorded information off either end of a voice segment. This command also enables you to trim all silence off either end of a voice segment.

Undelete (from the voice segment list display)

Undeletes a segment that is marked Deleted.

Undelete (from the voice segment file list display)

Undeletes a segment file that is marked Deleted.

<Ctrl+G>

Stores a voice segment name in a temporary buffer. It is used to create groups for concatenated playback. The buffer has room for up to 15 names.

<Ctrl+P>

Restores the buffer of voice segment names into either the Group 1 or Group 2 lists in the PlayGrp display. The voice segment names are stored in the buffer with the <Ctrl+G> command.

<Ctrl+T>

Moves the highlight bar to the first position on the voice segments list.

<Ctrl+B>

Moves the highlight bar to the bottom position on the voice segments list.

Voice Prompt Editor troubleshooting

This section describes some problems you may encounter and their possible causes and solutions.

Logon problems

Unable to establish session with Meridian Mail

A temporary problem exists with Meridian Mail. Check the VPE Configuration Meridian Mail Channel Allocation Table setup to determine if the parameters have been set properly for VPE use. Use ACCESS Link Diagnostics to confirm that the ACCESS link has been synchronized. Try again later; if it still fails, contact your Northern Telecom (Nortel) service representative.

Not prompted for account number or password

An Account number or Password was supplied when the Voice Prompt Editor was first installed. Contact your Nortel service representative.

Account number or password invalid

Restart the Voice Prompt Editor, this time supplying the correct information. Contact your Nortel service representative.

Meridian Mail is currently busy

All available Meridian Mail voice channels are in use. Try again later; if it still fails, contact your Nortel service representative. You may have to revisit Meridian Mail channel configuration in the Channel Allocation Table (CAT table) and confirm that VPE configuration complies with Meridian Mail configuration.

Already logged on

You try to log into an account that is already in use (possibly because the Voice Prompt Editor session aborted, or the previous session hung). You are logged off automatically after the timeout period set by the system administrator has elapsed. In most cases, you can try again in about five minutes.

Play/record problems

After Play or Record is pressed, telephone does not ring

The wrong telephone number has been dialed.

Telephone is idle

Make sure the telephone is hung up, and let it ring before picking up the receiver.

Call was forwarded to <DN>. Connection dropped

Make sure that call forwarding at the associated telephone set is not in operation.

Editing problems

Trim command doesn't work properly

Ensure that silence compression is enabled on Meridian Mail.

Note: For information on Voice Prompt Editor Error messages, see Appendix B in this guide.